

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Moore et al.

Serial No.: 10/791,006

Filed: March 2, 2004

For: NOVEL MASKED NITROGEN
ENHANCED GATE OXIDE

Confirmation No.: 1271

Examiner: M. Trinh

Group Art Unit: 2822

Attorney Docket No.: 2269-4305.2US
(99-1251.02/US)

Notice of Allowance Mailed:

September 18, 2006

NOTICE OF EXPRESS MAILING

Express Mail Mailing Label Number: EV 826305908 US

Date of Deposit with USPS: December 11, 2006

Person making Deposit: Di M. Sanders

TRANSMITTAL LETTER

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit herewith Part B - Fee(s) Transmittal for the above-captioned application and a check in the amount of \$1,700.00 in payment therefore.

Also enclosed are an Amendment Pursuant to 37 C.F.R. § 1.312(a) (18 pages); Comments on Statement of Reasons for Allowance (3 pages); and Fee Addressee for Receipt of PTO Notices Relating to Maintenance Fees (2 pages).

Serial No.: 10/791,006

Applicants understand that no additional fees are required. However, if the Office determines that any comparison fees or other additional fees are required, the Commissioner is authorized to charge any such fees to TraskBritt Deposit Account No. 20-1469. A copy of this Transmittal Letter is enclosed for deposit account charging purposes.

Respectfully submitted,

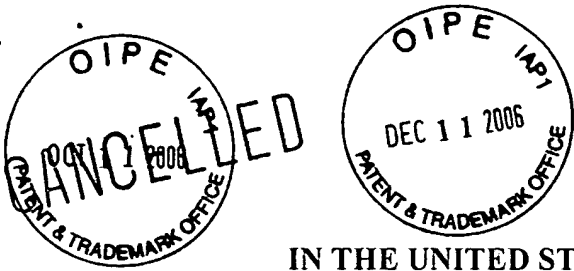


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Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: December 11, 2006
JRD/mah:lmh

Enclosures: Part B - Issue Fee Transmittal
Check No. 23360 in the amount of \$1,700.00
Copy of Transmittal Letter
Amendment Pursuant to 37 C.F.R. § 1.312(a) (18 pages)
Comments on Statement of Reasons for Allowance (3 pages)
Fee Addressee for Receipt of PTO Notices Relating to Maintenance Fees (2 pages)

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COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is filed in response to the Notice of Allowance mailed September 18, 2006 and sets forth Applicants' comments, pursuant to 37 C.F.R. §1.104(e), on the Examiner's Statement of Allowable Subject Matter accompanying the Notice of Allowance.

In the Notice of Allowance mailed August 24, 2005, the Examiner indicates:

Claims 35-40 are allowed.

Applicant's amendment and accepted terminal disclaimers filed on June 13, 2005 have overcome the rejections of claims 35-40 in the last office actions. The references of record including Aronowitz (6,033,998), Wang (6,017,808), Chau (6,087,236), etc., alone or in combination, do not anticipatively disclose each and every aspect of the claimed method, or fairly make a prima facie obvious case of the claimed method, in combination with other processing claimed limitations as recited in base claim 35, the inclusion of forming a resist over at least a portion of an oxide layer formed over a substrate; patterning the resist to create at least one exposed area of the oxide layer having a first thickness; hardening the at least one exposed area of the oxide layer using a remote plasma nitrogen hardening treatment; processing the substrate and the oxide layer to create at least one P-channel device having a hardened oxide and an array of N-channel devices, each of the N-channel devices included within the array having a nonhardened gate oxide; forming a second resist over at least a portion of the oxide layer; and conducting a second remote plasma nitrogen hardening treatment to create at least one second hardened area having a second thickness and at least one non-hardened area within the oxide layer.

In the Notice of Allowance mailed September 18, 2006, the Examiner indicates:
Claims 35-40 are allowed.

Applicant's amendment filed August 23, 2006 and convincing remarks have overcome the rejection in the last office action. The references of record including Aronowitz (6,033,998), Mukhopadhyay (6,399,448), Barsan (5,942,780), etc., alone or in combination, do not anticipatively disclose each and every aspect of the claimed method, or fairly make a prima facie obvious case of the claimed method for hardening at least a portion of a gate oxide layer on a substrate, which method, such as in claim 1, comprises patterning the first resist to create at least one exposed area of the oxide layer and at least one masked area of the oxide layer; hardening the at least one exposed area of the oxide layer using a remote plasma nitrogen hardening treatment having a temperature approximately less than 90°C; stripping the first resist; forming a second resist over at least a portion of the oxide layer masked by the first resist; patterning the second resist to create at least one exposed area of the oxide layer and conducting a second remote plasma nitrogen hardening treatment to create at least one second hardened area and at least one nonhardened area within the oxide layer.

Applicants concur with the reasons as stated by the Examiner insofar as they comprise a summary, which is exemplary and not limiting. However, the scope of the claims is based on the

actual language of the claims and equivalents thereof, and not on a paraphrase or summary of the claim language.

The independent claims as allowed recite features and methodology in addition to, and in different language than, those described in the Statement of Allowable Subject Matter. Furthermore, the dependent claims recite elements in addition to those of the independent claims, which are also not reflected in the Statement of Allowable Subject Matter. Such additional elements, in combination with those of the independent claims from which each claim depends, provide additional reasons for patentability. Accordingly, the scope of the claims must be determined from the literal language of each as a whole, as well as all equivalents thereof.

Therefore, to the extent that the Examiner's reasons for allowance as stated are not relevant to, or wholly encompassing of, a particular claim, independent or dependent, Applicants assume that, pursuant to 37 C.F.R. §1.104(e), the Examiner has determined that the record of the prosecution as a whole of the application makes clear the reasons for allowing those claims. Further, it appears, pursuant to M.P.E.P. 1302.14, that the Examiner's Statements of Allowable Subject Matter are not intended to encompass all of the reasons for allowance.

Respectfully submitted,



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Date: December 11, 2006
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